

Phalium (Semicassis) vector, a New Deep-Water Species from the Central Indian Ocean

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ABSTRACT

Phalium (Semicassis) vector, a new species of the family Cassidae, is described from the Saya de Malha Bank, northeast of Mauritius in the Indian Ocean. It differs from its closest relative, *Phalium microstoma* (von Martens, 1903) from Somalia, in having a lighter, less elongate shell with stronger beads on the spiral lirae.

Key words: Cassidae, Saya de Malha Bank, Indian Ocean.

INTRODUCTION

A number of new species of marine mollusks have been collected over the past few years by Soviet research vessels exploring the Saya de Malha submarine bank in the central part of the Indian Ocean. Among these are species of cassids not known at the time of my revision of this family (Abbott, 1968).

In 1975, Kilburn described *Phalium glabratum* sub-species *fernandesi* from deep water off Somalia. Two years later it was dredged by the R/V GORDY on the Saya de Malha Banks. With it were recovered at least five specimens of a new *Phalium* referable to the sub-genus *Semicassis* Mörch, 1852.

The bathymetry and geology of the Saya de Malha Bank are discussed by Bouchet and Bail (1991:161), while Bondarev and Röckel (1992) provided an excellent popular account of this bank, which is located along the Mascarene Ridge north of the Mauritius and Cargados Carajos Shoals (between 9°30'S and 12°20'S, and 59°30'E and 62°30'E).

SYSTEMATICS

Phalium (Semicassis) vector Abbott, new species
Figures 1–2

Synonymy:

Phalium sp. 1, Bondarev & Röckel, 1992:28,32, fig. 5.

Description: Shell (fig. 1) reaching 60 mm in length, light, strong, evenly ovate, with numerous, fine, flattish, crowded, weakly-beaded spiral lirae separated by sunken

interstices of equal width. Color opaque white with large, faint, light-brown blotch on dorsal surface of last whorl. Protoconch (fig. 2) of 3½ whorls, obtuse-conical, glassy-white, smooth. Teleoconch of 5½ whorls, the last bearing 23 flattish, spiral cords with fine beads at intersections with fine axial threads. Suture simple, slightly impressed. Spire convex-conic. Aperture ¾ shell length. Outer lip reflected, of variable thickness, enamel-white, crossed by 20–22 distinct, sharp white denticles. Both true and false umbilici small, open, deep. Channel behind siphonal canal deep, narrow. Parietal wall slightly glazed over. Anterior part of columella strongly and unevenly pustulose, inner edge with 4–5 small denticles, outer edge with 3–4 small, rounded projections. Soft parts and operculum unknown.

Type locality: Central Basin, Saya de Malha Bank, Mascarene Ridge, northeast of Mauritius, Indian Ocean, dredged from sandy silt bottom at a depth of 80 meters, R/V GORDY, 1989. More precise locality data did not accompany the holotype.

Material examined: Holotype, USNM 860326, Paratypes 1–3, Donald Dan collection, all from the type locality. The specimen illustrated by Bondarev and Röckel (1992: fig. 5) is designated as paratype 4.

Etymology: I take pleasure in naming this species after the first recreational diving vessel to operate under the Russian flag, the *Vector*.

Comparative remarks: This new species belongs to a species group of *Phalium (Semicassis)* mainly limited to

Table 1. *Phalium (Semicassis) vector* new species. Linear shell measurements (mm) and counts.

	Length	Width	Number of whorls
Holotype	53.6	32.0	7
Paratype 1	56.8	32.1	8
Paratype 2	53.4	33.4	7
Paratype 3	60.0	33.5	9



Figures 1, 2. *Phalium (Semicassis) vector* new species. **1.** Apertural, lateral, and dorsal views of the holotype. 1.0 X. **2.** Protoconch of paratype 1. Both from Saya de Malha Bank, Mascarene Ridge, N. E. of Madagascar, dredged from sandy silt bottom at a depth of 80 meters, R. V. GORDY, 1989. Scale bar = 500 μ m

the western Indian Ocean, although similar species, such as *P. sculptum* J. de C. Sowerby, 1840 (Miocene), *P. mekranicum* (Vredenburg, 1925) (Upper Miocene) and *P. oligocalanticum* (Vredenburg, 1925) (Oligocene) have been reported from fossil beds on the mainland of India.

Phalium vector most closely resembles the eastern African deep-water *Phalium (Semicassis) microstoma* (von Martens, 1903), from which it differs in being much lighter in weight, less elongate, and in having stronger beads on the spiral lirae. *Phalium vector* lacks the four or five spiral brown bands on the body whorl, but instead has a faint tan blotch on the dorsal surface of the body whorl. The very weak, rounded projections on the outer, left edge of the columella of *P. vector* are reminiscent of the fingertip projections found in the shallow-water Indian Ocean *Phalium faurotis* (Jousseaume, 1888).

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